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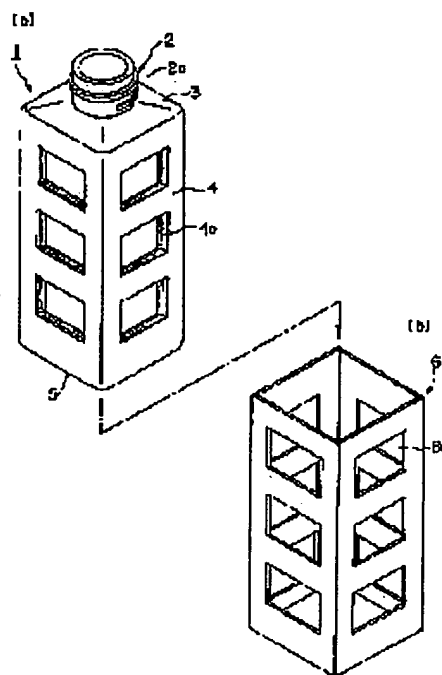
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(54) CYLINDRICAL COVERING BODY AND ULTRATHIN HOLLOW CONTAINER COVERED WITH THE SAME

(57)Abstract:

PROBLEM TO BE SOLVED: To recover a used disposable hollow container efficiently for recycling by a method wherein the hollow container is formed so that it can be compressed easily to reduce its volume and labels or the like stuck to its trunk can be easily separated while preventing heat distortion of the container by the label.

SOLUTION: The hollow container main body in an tubular shape comprising a mouth/neck part 2, a shoulder part 3 connecting to the mouth/neck part, a trunk part 4b and a bottom part 5 is made up of a thermoplastic synthetic resin by blow molding, and while the trunk part and the bottom part are formed in a thickness that is not so thin as to be distorted by thermal expansion, the trunk part is formed in an ultrathin structure with protuberances 4a deformative in expansion at the time of filling under heat provided, being dented toward the inside from the trunk wall surface 4b, and thereby the ultrathin hollow container is made up. A covering body 6 in a case-like shape having openings 6a and serving as a label or the like is put over the trunk part of the container, and while unnecessary deformation of the container arising from expansion can be prevented, the protuberances 4a are deformed by expansion and projected



through the openings 6a to hold the covering body 6, and thereby the ultrathin hollow container 1A covered with the covering body 6 is composed.

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CLAIMS

[Claim(s)]

[Claim 1]Are cover bodies, such as a label laminated on a drum wall part of a hollow container which carried out tubed, and this cover body is formed in a tube-like object according to shape of a drum wall of a hollow container, and. A tubed cover body which can be laminated on a hollow container, wherein an opening for a portion in which a drum wall of a hollow container carries out swell deformation to a cylinder surface of this attachment object to project is formed.

[Claim 2]A tubed cover body which can be laminated on a hollow container indicated to claim 1, wherein said cover body is formed using paper.

[Claim 3]A tubed cover body which can be laminated on a hollow container indicated to claim 1, wherein said cover body is formed using a synthetic resin film.

[Claim 4]By carrying out blow molding, a hollow container which carried out tubed [which consists of a top neck part, a shoulder formed successively to it, a drum section, and a pars basilaris ossis occipitalis] using thermoplastic synthetic resin said shoulder and a pars basilaris ossis occipitalis, A hollow container of super-thin meat which forms in thin meat of a grade which does not carry out thermal expansion deformation, said drum section dents and provides a lobe in which swell deformation is possible inside a wall surface, and forms it in super-thin meat, and forms it so that cover bodies, such as a label formed in tubed, can be laminated, and is characterized by things.

[Claim 5]By carrying out blow molding, a hollow container which carried out a top neck part, a shoulder formed successively to it, a drum section, a pars basilaris ossis occipitalis, and tubed [becoming] using thermoplastic synthetic resin said shoulder and a pars basilaris ossis occipitalis, Form in thin meat of a grade which does not carry out thermal expansion deformation, and said drum section, To a drum section of a hollow container of super-thin meat which dented a lobe which carries out swell deformation inside a wall surface, and was formed

in super-thin meat. A hollow container of super-thin meat which said lobe made laminate cover bodies, such as a label formed in tubed, so that projection is possible, stopped a lobe which carried out swell deformation to an opening which unnecessary modification by expansion was prevented and was provided in a cover body, fixed a cover body, and provided cover bodies, such as a label characterized by things.

[Claim 6]A hollow container of super-thin meat which provided cover bodies, such as a label indicated to claims 4 thru/or 5, wherein it is formed and said hollow container becomes so that biaxial stretch blow molding may be carried out and it may have heat resistance.

[Claim 7]A hollow container of super-thin meat which provided cover bodies, such as a label indicated to claims 5 thru/or 6 characterized by coming to constitute said cover body using the same construction material as a hollow package body.

[Translation done.]

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DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Field of the Invention]The invention in this application exfoliates simply the label etc. which were stuck on the drum wall of a hollow container from a container, With respect to the hollow container made of a synthetic resin which can be classified and collected, it is related with the light-gage hollow container which laminated the disengageable label etc. on the hollow container which established the panel wall which absorbs the pressure deflection in a container to the drum wall part of a container especially simply.

[0002]

[Description of the Prior Art]Since a sanitary aspect and contents can be checked and reuse is possible as a container which accommodates edibles, such as alcohol, soy sauce, cooking oil, and a soft drink, from the former, glass ** has been used, but. Recent years came, with the appearance of a new synthetic resin material, with progress of the forming technique of the hollow container using it, it is lightweight, and can be hard to divide, shaping of various hollow containers is attained, and the hollow container made of a synthetic resin came to be used instead of glass **.

[0003]Then, the hollow container by which biaxial stretch blow molding was carried out using polyethylene terephthalate (PET) resin, Since it has very high transparency and gloss, and impurities, such as a plasticizer, are not contained and it excels also in gas barrier property and the preservability of contents, it is increasingly used in the range wide as various drinking water, a seasoning, and another alcoholic beverage and food-grades container. Along with change of a social situation, productivity and convenience come to be searched for, and, simultaneously with it, change comes to be seen also in respect of eating habits, and an established soft drink, a sport drink, etc. have come to be consumed so much.

[0004]By the way, while such a living environment changed, in connection with the established

foodstuffs accommodated in the hollow container made of a synthetic resin coming to be consumed in large quantities, the container of the empty used as used came to be discharged in large quantities as garbage. And the synthetic resin vessel discharged by these large quantities, It is also becoming various social problems from the reasons of there being a possibility of polluting a living environment at the same time it requires a great disposal cost, in order to process by the same method as the conventional refuse disposal from calorific value becoming large, if it is difficult to decompose like general refuse, and incineration processing is carried out.

[0005]Then, about processing of the used synthetic resin vessel also used as the cause which causes social problems, such as such environmental pollution and a waste of resources, container recycling law will be enforced from the standpoint of effective use of resources. However, in order to reuse smoothly the container discarded by becoming used as resources, the container which became empty can collect in large quantities and efficiently, and it is a necessary condition that it can classify and refine so that it may be usable as resin raw materials, and reuse can moreover be carried out in low cost. Therefore, in order to collect hollow containers efficiently, to desire to be discarded after making as small as possible volume of the container which became empty and to reuse as a raw material, it must be what can be easily classified so that the collected container may not contain an impurity.

[0006]By the way, in the goods marketed widely, as various hollow containers made of a synthetic resin come to be used abundantly. Are, although it must be the thing which heat-sterilized juice and other contents and was poured in into the hollow container with the hot state and which carried out what is called heating restoration, and these containers, Since it is easy to change the wall surface of a container in connection with content volume contracting and the inside of a container being in a reduced pressure state, since it is certainly cooled after carrying out heating restoration of the contents and being sealed, it is necessary to prevent such modification. Then, in order for the wall surface of a container to change and not to spoil the appearance of appearance, What was fabricated by shape which has decompression-proof nature and intensity so that the wall surface of a container may not change is used as indicated to JP,56-109905,U, JP,57-199022,U, etc.

[0007]In the hollow container of the heat resistance which gave decompression-proof structure to the drum wall part as described above widely used from the former, In order to raise the buckling strength of a container, the rugged form rib of the hoop direction was provided in the drum wall part, and in order to absorb change of the internal pressure accompanying change of the content volume of a container, what established the absorption panel wall which changes a part of drum wall was common. Such a decompression container-proof to the external wall surface of a drum section usually And contents and quality in a container, In the conventional hollow container 31 which was described above from it being common for the

label etc. which specified the manufacturer and other matters to be stuck and to be marketed, At the same time it forms in the hoop direction of the drum section 34 the rib 34b which carried out rugged form for giving intensity as shown in drawing 10, and it forms the absorption panel wall 34c in the drum section upper and lower sides which avoided this rib, The flat field 34a for sticking L, such as a label, on the portion except having formed said rib 34b and the absorption panel wall 34c is formed in the drum section 34, and L, such as a label, is stuck on the attachment portion concerned. [0008]However, in the pressure-resistant hollow container 31 which has the above structures. Since it is not easy to have established the reinforcing rib 34b and the absorption panel wall 34c, to compress the container which became empty, and to make volume small, The flat special portion which it made L, such as a label, easy for it to be difficult to collect the containers of empty with volume in large quantities, and to stick on the drum section 34 must be provided, L, such as a label stuck on the wall surface of the drum section 34, In order to make it hard to separate, use the adhesives 37, are stuck, and, Reproduction took time and effort too much so that it might not be easy to classify so that it may grind the collected container that different various construction material from the construction material of a container and printing ink are used for the construction material of the label L and it may not contain an impurity from it having been general and it could reuse as a raw material. Therefore, if it is the hollow container 31 which continues being the former which the composition of the container discarded described above, it is difficult to collect the containers discarded by empty by becoming in large quantities and efficiently, and to satisfy the requirements for reusing as a raw material.

[0009]Then, the thing which the hollow container which has pressure-proofing and a thermal protection system became used, and was discarded, It can collect in large quantities efficiently, and impurities, such as a label, can be easily separated after crushing, As a result of making the research on the hollow container it enabled it to reuse simply as a raw material, many proposals about the container which has various structures which are indicated to JP,3-200534,A, JP,5-16634,U or JP,5-44509,U, etc. are made.

[0010]For example, the thing to indicate to above-mentioned JP,5-44509,U, Form the substrate used as the label stuck on a hollow container with a polyester resin film homogeneous as a hollow container, and. After printing to the inner surface side of this film, the paint containing the microcapsule which has air bubbles from on this printing surface is applied, and the label body whose specific gravity is smaller than a package body is formed. And after doubling said label body with a container, judging to specified shape and forming this label body in the label of the heat contraction nature in which cylindrical attachment is possible, this label is put on the prescribed position of a hollow container, is heated, and heat contraction is carried out, and it is stuck.

[0011]Thus, as specific gravity difference can classify a label segment and a container section

easily after crushing finely the hollow container of the empty which stuck the label, but it described above, in order to stick on a container, since the special paint is needed, there is a problem that cost costs dearly. Then, as a thing which abolishes these problems, can stick a label on the drum section of a container even if it does not use the special paint or adhesives, and enabled it to exfoliate simply compared with the conventional thing, A heat shrinkage label is used so that it may see to JP,5-16634,U and others.

[0012]The hollow container using such a heat shrinkage label, The label 46 for sticking on the drum section 44 of the hollow container 41 which consists of saturated polyester resin represented by polyethylene terephthalate and which carried out biaxial stretch blow molding, as shown in drawing 11, It forms using the heat contraction nature film which consists of polyester resin homogeneous as a container, and a trade name, the manufacturer, etc. are printed and judged to this film surface, and the perforations 46a are formed, and it operates orthopedically on the label (what is called a shrink label) of the heat contraction nature formed in tubed. And after putting the label 46 made tubed in this way on the prescribed position which carried out the smooth field which sticks the label of the hollow container 41, by heating this label 46 using infrared heating equipment etc., and making it contract, it is stuck on the drum wall side 44, and become the hollow container 41A, but. Since such a label is not stuck using adhesives like before, a label is easily separable from a package body.

[0013]Since adhesives are not used for each container which stuck a shrink label etc. which were described above sticking a label etc., a label is easily separable from an empty package body, but. However, since it was having structure which the rib parts etc. which give the degree of absorption panel wall partial Sagitta sturdy for any container to give decompression-proof nature and heat resistance established and which cannot change easily, it was difficult to compress simply so that the container which became empty is pressed and capacity becomes small. So, in order for collecting a lot of containers to be able to refine easily the container which was easy and were collected and to aim at reuse as a raw material. Attachment objects, such as a label stuck on the container, enable it to exfoliate simply, and an appearance of the hollow container provided with the decompression-proof nature the package body enabled it to compress simply, and resistance to pressure is desired.

[0014]

[Problem(s) to be Solved by the Invention]In order to collect efficiently the hollow containers discarded by the invention in this application serving as used in large quantities and for reuse to be possible, Fabricate the volume of the hollow container which became empty so that it may become as small as possible, and it can compress easily, and. the drum wall part of this hollow container -- heat -- to the thin-walled vessel which established the deformable absorption panel wall, [fabricate and] It constitutes so that the label etc. which are stuck on this thin-walled vessel may be made into the structure where it can exfoliate easily and heat

modification of a container may be prevented with this label, The collected container can be easily classified so that an impurity may not be contained, and it aims at providing the hollow container it enabled it to reuse as a raw material.

[0015]

[Means for Solving the Problem]A hollow container which carried out a top neck part, a shoulder connected with it, a drum section, a pars basilaris ossis occipitalis, and tubed [becoming] is fabricated by blow molding using thermoplastic synthetic resin, Form said top neck part in thickness of intensity which does not carry out heat modification, and it forms in a peripheral face a thread part which screws a lid on, Said shoulder and a pars basilaris ossis occipitalis are formed in thin meat of a grade which does not carry out thermal expansion deformation, Said drum section is formed in super-thin meat which provided a lobe in which inflation deformation by heating restoration is possible, Make cover bodies, such as a label which formed a hollow container in which heating restoration is possible, and it formed in a drum section of this hollow container tubed, and formed an opening in which said lobe can project, laminate, and. A hollow container of super-thin meat which stuck cover bodies, such as a label, so that cover bodies, such as a label, might be fixed by a lobe is constituted at the same time a container wall prevents modification unnecessarily, when heating restoration of the solution is carried out into this container.

[0016]

[Embodiment of the Invention]Blow molding is carried out using polyethylene terephthalate resin or other thermoplastic synthetic resin, At the same time it fabricates in the heat-resistant hollow container 1 which carried out tubed [which has the top neck part 2, the shoulder 3, the drum section 4, and the pars basilaris ossis occipitalis 5] said top neck part 2, The heating restoration which it formed in thickness and formed the thread part 2a in the peripheral face, and formed said shoulder 3 and the pars basilaris ossis occipitalis 5 in the thin meat of the grade which does not carry out thermal expansion deformation, formed the lobe 4a which carries out swell deformation when it fills up with an inner solution in said drum section 4, and was formed in super-thin meat also fabricates the possible hollow package body 1.

[0017]On the other hand, to paper, a resin film, etc., a trade name and the manufacturer, Or a pattern, a design, etc. are displayed by printing etc. and a label base material etc. are created, and it judges in the suitable form where this label base material was set by the size of a container, and forms in the label piece 8 which formed the opening 8a of two or more letters of a window difference corresponding to the lobe provided in the drum section of the container. And the label piece 8 cut out as mentioned above joins both ends so that it may become a tube-like object which can be covered in a hollow container, and it forms them in a cover body or the attachment objects 6, such as a label which carried out tubed [that the opening provided in this label piece 8 corresponded to the lobe 4a of said hollow container 1].

[0018]Form the lobe 4a which carries out swell deformation to the container drum part fabricated as mentioned above by heating or restoration, and in the hollow container 1 of super-thin meat. It makes with the hollow container 1A in which heating restoration of the super-thin meat which said lobe 4a made laminate the attachment objects 6, such as a label which formed said opening 6a and was formed in tubed, so that swell deformation is possible, and laminated cover bodies, such as a label, is possible. If a lid is made to screw on the top neck part 2 and it seals after carrying out heat restoration of the fluid in which a soft drink and others were heat-sterilized into said hollow container 1A, then, said hollow container 1A with which heat restoration of the fluid was carried out, The lobe 4a in which the swell deformation provided in the drum wall part is possible carries out swell deformation so that it may project from the openings 6a, such as said cylindrical label, and it is fixed so that a tubed cover body or the attachment objects 6, such as a label, may stop to this lobe 4a and it may not escape to it.

[0019]

[Example]It explains referring to drawings for the invention in this application below based on one optimal example.

Although the example 1. invention in this application fabricates the heat-resistant tubed hollow container 1 which has the shoulder 3 and the drum section 4 which connected with the top neck part 2 at it preforming which consists of polyethylene terephthalate resin by the usual biaxial stretch blow molding, and the pars basilaris ossis occipitalis 5, As shown in drawing 1, at this time said top neck part 2, Form in the thickness of the grade which does not carry out heat modification, and form in the peripheral face the thread part 2a which screws a lid on, and said shoulder 3 and the pars basilaris ossis occipitalis 5, It forms in thin meat in the range of the grade which does not carry out thermal expansion deformation, and further, a section forms said drum section 4 in tubed [which carried out the quadrangle], and it forms the lobe 4a which carries out swell deformation with heating and projects in a part of drum wall part 4, and fabricates it in the tubed hollow container 1 in which the heat restoration formed in the shape of super-thin meat is possible.

[0020]The lobe 4a which carries out swell deformation with heating formed in said drum section 4, As shown in drawing 4 (a), when it is formed in the state where it dented inside the wall surface 4b in a part of drum wall 4 formed in the shape of [quadrangle tubed] super-thin meat and heat restoration of the fluid is carried out into a container, as shown in drawing 4 (b), When the lobe 4a carries out heat swell deformation to an arrow direction, it is reversed, and it is formed so that it can change into the state which shows in drawing 5 (b) from the state projected namely, shown in drawing 5 (a) outside the wall surface 4b. Thus, by forming the projection part 4a which was provided in the drum section 4 of the hollow container and in which heat swell deformation is possible in the shape where it dented from the wall surface 4b

of the drum section in tapered shape to the inside, it is formed so that the cover bodies 6, such as a label which carried out tubed, can be put easily on the drum section of the hollow container 1.

[0021]The invention in this application displays a trade name, the manufacturer and notes or a pattern, a design, etc. on paper, a resin film or a metallic foil used as the substrate which forms a label and a vignette, etc. by printing etc., and makes coated substrates, such as a label set by the container used as the candidate for use, to them. And as shown in drawing 3, cut out said attachment substrate with which printing etc. were performed in the shape and the size suitable for the container for use, and. It is processed into the predetermined part of this judged coated substrate by piercing the opening 8a in which the lobe 4a which was provided in the drum section 4 of said hollow container 1, and which carries out swell deformation can project in the shape of a window difference, and the cover pieces 8, such as a label, are produced. Thus, it bends so that it may become a tube-like object of the quadrangle which can be covered to the drum section 4 of the hollow container 1, it joins so that the both-ends neighborhood may be doubled, and the cover piece 8 cut out and produced according to the container for use is fabricated to the cover bodies 6, such as a label which carried out the shape of an rectangular pipe, as shown in drawing 1.

[0022]The cover bodies 6, such as a label fabricated by tubed [square] as mentioned above, As described above, the tubed hollow package body 1 which formed the lobe 4a which carries out heat swell deformation to the drum wall part 4, and was fabricated by super-thin meat is covered, and it is fabricated by the hollow container 1A which carried out tubed [of the super-thin meat in which the heat restoration covered with the cover bodies 6, such as a label, is possible]. Thus, as shown in drawing 2, if heat restoration is carried out, the hollow container 1 tends to be heated from an inside, tends to expand, and tends to transform fluids, such as a heat-sterilized soft drink, into the hollow container 1A of the super-thin meat with which the cover bodies 6, such as a label, were covered, but. Since the drum section 4 is bound tight with the tubed attachment object 6 as shown in drawing 5 (b), the lobe 4a in which the swell deformation in the state where it dented in the drum wall inside is possible will be projected from the opening 6a which was reversed outside and provided in the cover bodies 6, such as a label, without the ability to carry out inflation deformation.

[0023]And the attachment object 6 which made tubed the lobe 4a which carried out reversal projection from the openings 6a, such as a label, is stopped, are fixed so that it may not escape from hollow container 1 main part, at the same time it will be stuck to the 4th page of the drum wall of the hollow container 1, as shown in drawing 2, but the cover bodies 6, such as the above mentioned label. If the cover bodies 6, such as a label, are formed with the resin film of heat contraction nature, it can fix more closely. Thus, the product which carries out heat restoration of the fluids, such as juice and other soft drinks, cools in the heat-resistant tubed

hollow container 1A of the super-thin meat on which the cover bodies 6, such as a label, were laminated after screwing on and sealing a lid to the top neck part 2 of this hollow container, and is not changing the shape of this hollow container into it was able to be obtained.

[0024]Although the hollow container of the super-thin meat in which the drum section section carried out tubed [square] was used as container shape in the above-mentioned example, Even if the invention in this application is a hollow container of the thin meat in which it is not restricted to the hollow container of such shape, and the drum section section of the container was circular, or carried out tubed [elliptical], it can be fabricated like the above-mentioned invention. Even if the hollow container fabricated as mentioned above does not necessarily carry out heat restoration of the content fluid, also when ordinary temperature restoration is carried out, the lobe 4a in which swell deformation is possible can carry out reversal projection outside with the internal pressure of carbon dioxide, an inner solution, etc., and it can fix the attachment objects 6, such as a label.

[0025]In the case of a cylindrical light-gage hollow container with a circular example 2. drum section section, As preforming which consists of polyester resin, such as polyethylene terephthalate resin, is fabricated in a cylindrical shape hollow container by the usual biaxial stretch blow molding like the case of the above-mentioned prismatic container and it is shown in drawing 6, The top neck part 12 forms in a peripheral face the thread part 12a which screws a lid on at the same time it fabricates it so that it may become thickness, the shoulder 13 and the pars basilaris ossis occipitalis 14 on the thin meat of the grade which does not carry out thermal expansion deformation, [fabricate and] The cylindrical drum section 14 is fabricated on super-thin meat, and this a part of drum wall part 14 is fabricated in the shape where it dented from the wall surface to the inside, and the hollow container 12 which carried out cylindrical shape of the super-thin meat which formed the lobe 14a so that swell deformation might be carried out with thermal expansion or a pressure and it might project is formed.

[0026]On the other hand, like the case where the attachment object of the shape of said rectangular pipe is formed, double a trade name, the manufacturer, notes, etc. with the container of the purpose of use, carry out a printing display to paper, a resin film, etc. used as the substrate of a label or a vignette object, and it makes with coated substrates, such as a label, Then, it judges in the shape suitable for the container which uses this attachment substrate, and it is processed into the predetermined part of the cut-out attachment substrate by piercing the opening 16a in which the lobe 14a which was provided in the drum section of said hollow container, and which carries out heat swell deformation can project in the shape of a window difference, and cover bodies, such as a label, are produced. Thus, the produced attachment object is made to curve so that it may become a cylindrical shape which can cover the drum section of a hollow container, and the both-ends neighborhood is piled up, and it joins, and fabricates on the attachment objects 16, such as a label which carried out cylindrical

shape.

[0027]The drum section of the cylindrical shape hollow container 11 which formed the lobe 14a which carries out heat swell deformation in a part of drum wall part, and was fabricated on super-thin meat as the cover bodies 16, such as a label fabricated cylindrical as mentioned above, were described above is covered, The hollow container 11A of the super-thin meat which carried out cylindrical shape in which the lobe 14a on which cover bodies, such as a label, were laminated can bulge is formed. And if ordinary temperature restoration of the fluids, such as a heat-sterilized soft drink, is carried out, in response to the internal pressure by filling liquid pressure, carbon dioxide, etc., tend to carry out inflation deformation of said hollow container to the hollow container 11A of the super-thin meat with which cover bodies, such as said label, were covered, but. Since the outside is covered with the cylindrical attachment object 16 and the drum wall part 14 whole cannot carry out inflation deformation, As the two-dot chain line showed to drawing 7, will be projected from the opening 16a which the lobe 14a in which the swell deformation formed in the state where it dented to the inside in 14 copies of light-gage drum walls is possible reversed, and was provided in the cover bodies 16, such as a label.

[0028]And the cover bodies 16, such as a tubed label, are stopped by the lobe 14a portion which carried out reversal projection from the opening 16a, and the cover bodies 16, such as the above mentioned label, are fixed so that it may not escape from the drum wall side of the hollow container 11, at the same time it will be stuck to drum wall 14 outside surface of the hollow container 11. Thus, ordinary temperature restoration of the fluids, such as a soft drink containing carbonic acid and an alcoholic beverage, was carried out, and after screwing on and sealing [container / 11A / of the super-thin meat on which the cover bodies 16, such as a label, were laminated / heat-resistant / cylindrical hollow] the lid to the top neck part 12, even if it carried out the mothball, in it, the good shape product which is not changing the drum wall of a container was able to be obtained.

[0029]Usual carries out biaxial stretch blow molding of the preforming which consists of polyolefin resin, such as polypropylene resin, like the case of the light-gage hollow container of the example 3. aforementioned cylindrical shape, As a drum section section fabricates in the tubed hollow container 21 which carried out the ellipse form and it was shown in drawing 8, Fabricate the top neck part 22 so that it may become thickness, and it forms in a peripheral face the thread part 22a which screws a lid on, the shoulder 23 and the pars basilaris ossis occipitalis 24 on the thin meat of the grade which does not carry out thermal expansion deformation, [fabricate and] The tubed drum section 24 is fabricated in the shape of super-thin meat, and this a part of drum wall part 24 is fabricated in the shape where it dented from the wall surface to the inside, the lobe 24a which can project by the swell deformation by thermal expansion or internal pressure is formed, and hollow container 21 tubed main part in

which heat restoration etc. are possible is formed.

[0030]Cut out attachment substrates, such as a label which carried out the printing display of a label, the vignette, etc. to the resin film of heat contraction nature according to the container of the purpose of use, like the case where said cylindrical attachment object is formed, in the shape suitable for the container to be used, and. It is processed into the predetermined part of the cut-out attachment substrate by piercing the opening 26a in which the lobe 24a which was provided in the drum section of said hollow package body, and which carries out heat swell deformation can project in the shape of a window difference, and a cover body or attachment objects, such as a label, are produced. Thus, it is made to curve so that it may become an elliptic tube form which can cover the drum section of the hollow container which carried out the shape of an elliptic tube for the produced attachment object, and the both-ends neighborhood is piled up, and it joins, and fabricates to the cover bodies 26, such as a label which carried out the ellipse-like cartridge.

[0031]The cover bodies 26, such as a label fabricated by the ellipse-like cartridge as mentioned above, As described above, after covering the drum section of the cylindrical shape hollow container 21 which formed the lobe 24a which carries out heat swell deformation in a part of drum wall part 24, and was fabricated on super-thin meat, the hollow container 21A of the super-thin meat which carried out the shape of an elliptic tube which heats the cover bodies 26, such as this label, with an infrared heater, was made to contract, and was covered is formed.

[0032]And with a fluid, if the hollow container 21A of said super-thin meat with which cover bodies, such as a label, were covered is filled up with fluids, such as salad oil and other oils, although the drum section of thin meat tends to carry out swell deformation with a pressure from an inside, Since the drum wall part 24 is bound tight by the cylindrical cover body 26 from the outside and inflation deformation cannot be carried out, It will be in the state where it projected from the opening 26a which the lobe 24a in which the swell deformation in the state where it dented inside the drum wall 24 is possible as a two-dot chain line shows to drawing 9 reversed, and was provided in the cover bodies 26, such as a label, The attachment objects 26, such as a tubed label, are stopped by this lobe 14a portion, and it sticks to a drum wall side, and it is fixed so that it may not escape from 24 copies of drum walls of the hollow container 21.

[0033]In the heat-resistant hollow container 21A of the super-thin meat on which the cover bodies 26, such as a label, were laminated as mentioned above. Also when heat restoration of the fluids, such as a soft drink, was carried out like Example 1 at the inside, after screwing on and sealing the lid to the top neck part 22 of this container, even if it was cooled, the product which carried out the good shape which the wall of this hollow container 21A is not transforming was able to be obtained.

[0034]As mentioned above, as stated, in the hollow container of the thin meat which fabricated thermoplastic synthetic resin to tubed by biaxial stretch blow molding, the invention in this application forms the drum wall part of a container in super-thin meat compared with the conventional thing, and. Form this a part of drum wall part in the state where it dented from the wall surface to the inside, and the lobe in which swell deformation is possible is formed with thermal expansion or internal pressure, Make the thing in which the opening in which the lobe cover bodies, such as a label laminated on said hollow container as absorb the stress which is going to carry out inflation deformation, are formed in tubed, and a hollow container carries out [a lobe] swell deformation to this cover body projects was formed laminate on said hollow container, and Heat resistance, A pressure-resistant hollow container is formed.

[0035]Therefore, the hollow container of the invention in this application on which a cover body or attachment objects, such as a label fabricated by tubed as described above, were laminated, Since neither the rib for reinforcement nor the panel wall for deforming force absorption is established when the inner solution accommodated in the container is exhausted and it is discarded, Since this container can be easily crushed only by pressing the drum section of a hollow container lightly and compressing it and adhesives are not used, cover bodies, such as a label which carried out tubed, can be made to exfoliate easily from the wall surface of a container.

[0036]And although the hollow container of the super-thin meat which stuck attachment objects, such as a label, as [fixed / filled up said hollow container with the inner solution, and could project the lobe in which said swell deformation is possible, and / in total, so that said attachment object stopped and might not fall out to a lobe] is formed, If said cover body is formed using the resin film which consists of the same construction material as a hollow package body, when using the collected container as a raw material and carrying out reuse, since an impurity can be prevented from being mixed, it can reproduce efficiently.

[0037]

[Effect of the Invention]Even if it does not make the hollow container with the label of the invention in this application into the shape which has a special structure, It can fabricate by a light weight which has inflation deformation-proof nature in the container of super-thin meat, And when discarding the hollow container with a label which could manufacture simply and cheaply the container which can laminate a label etc. without using adhesives, and became empty. Since a container can be compressed by weak power, can make volume small and a label etc. can be easily separated from a container, Since the container which could collect empty containers efficiently in large quantities, and collected them further is very easy to carry out reuse as a raw material, it can hold down cost low.

[Translation done.]

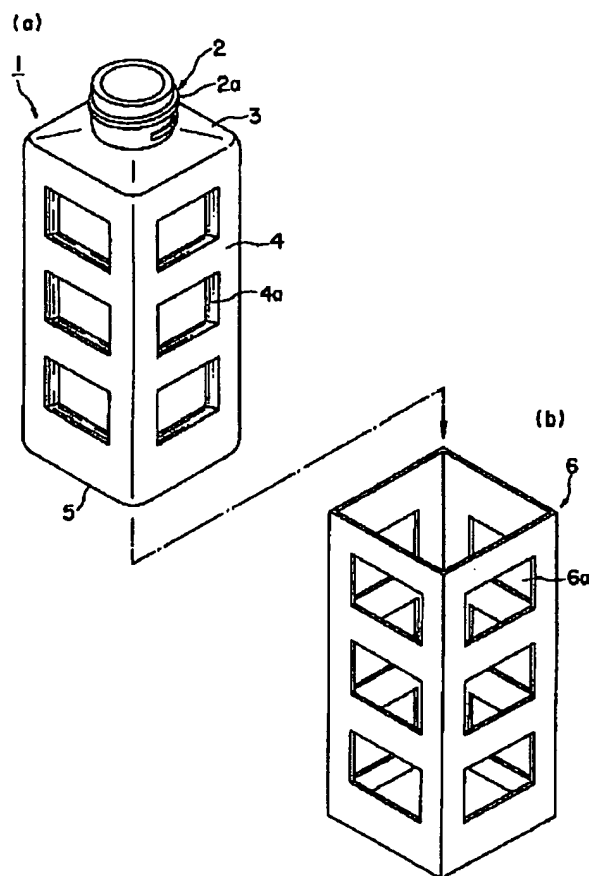
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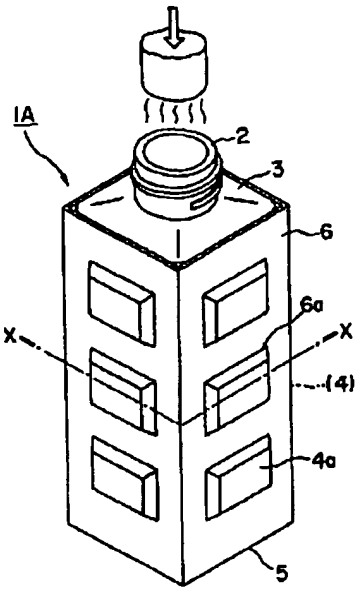
- 1.This document has been translated by computer. So the translation may not reflect the original precisely.
- 2.**** shows the word which can not be translated.
- 3.In the drawings, any words are not translated.

DRAWINGS

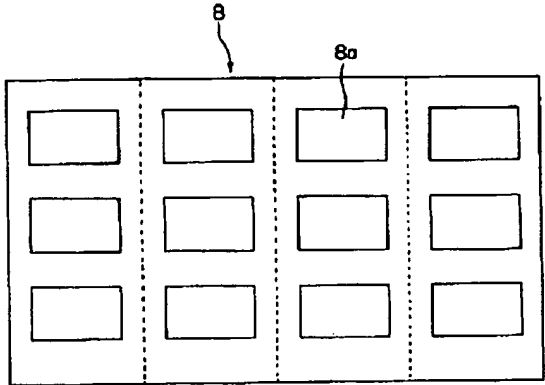
[Drawing 1]



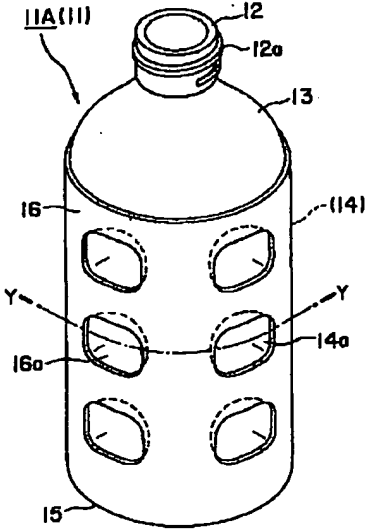
[Drawing 2]



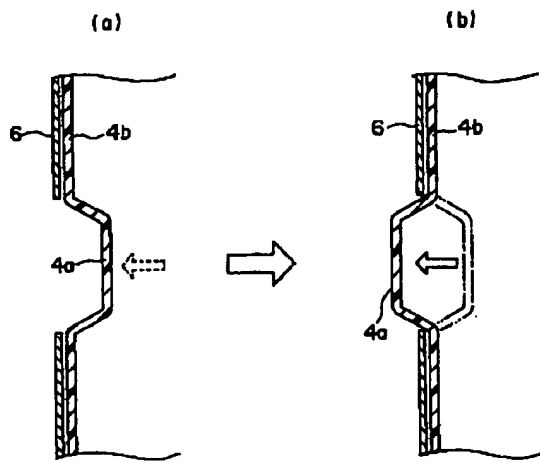
[Drawing 3]



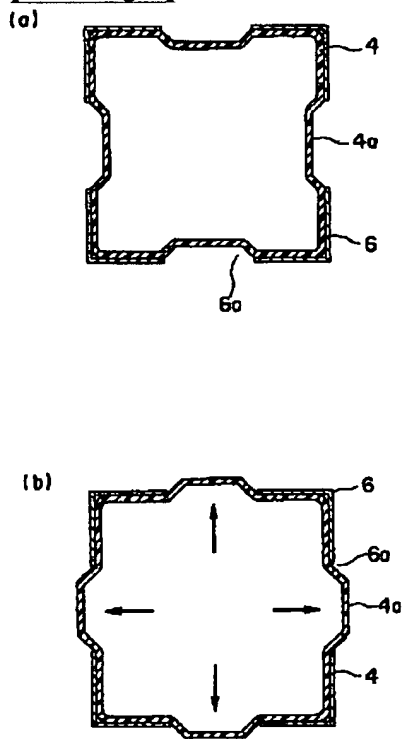
[Drawing 6]



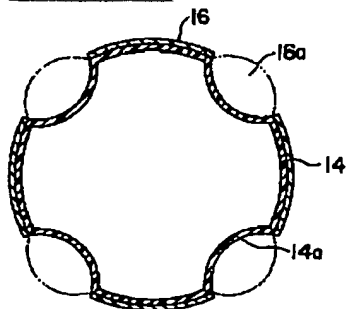
[Drawing 4]



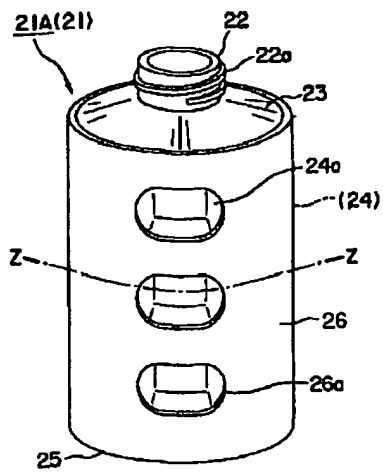
[Drawing 5]



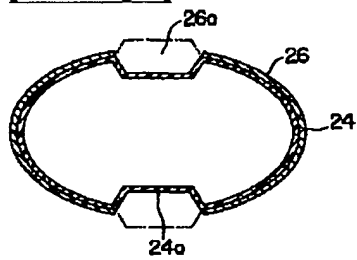
[Drawing 7]



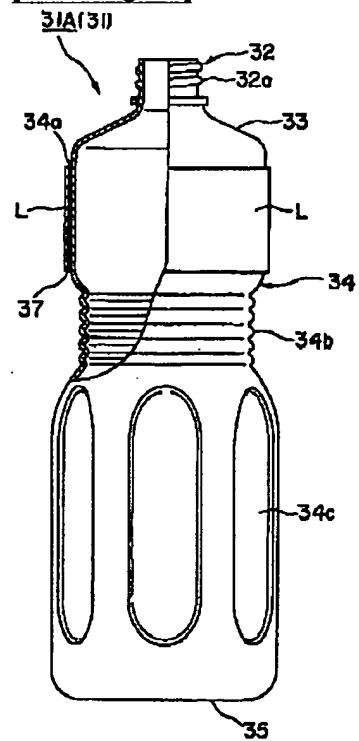
[Drawing 8]



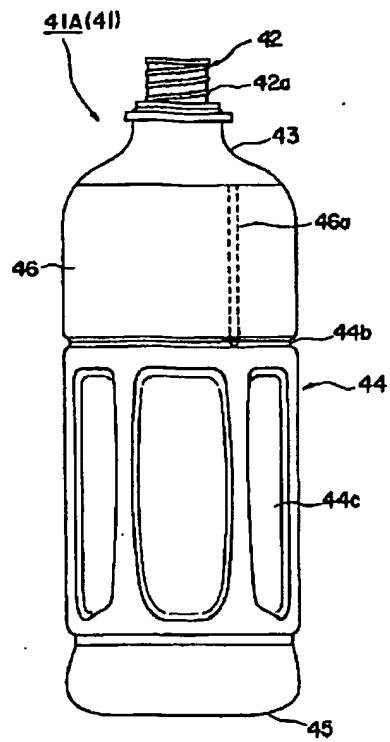
[Drawing 9]



[Drawing 10]



[Drawing 11]



[Translation done.]